

CLAIMS

1. External combustion engine, comprising a body (8),
at least one working chamber (18), combustion chamber (13), crankcase (21)
5 and compression chamber (6),
at least one working piston (20), compression piston (7) and crank mechanism
(22), and a valve gear and a heat exchanger,
wherein the required air is drawn by suction via valves or equivalent from the air
surrounding the engine, and
10 wherein the expanded hot air is directed after the working cycle from the
working chamber (18) through a valve (12) or (24) past the heater (17) into the
combustion chamber (13), to be used as combustion air,
c h a r a c t e r i z e d in that the air used as working gas is drawn by suction
through a valve (2) into the crankcase (21), where the air is pre-compressed
15 and from where the pre-compressed air can be moved through a valve (3) into
the compression chamber (6).
2. Engine according to claim 1, c h a r a c t e r i z e d in that in an isochoric
phase of the process, the working air is preheated by the exhaust gas from the
20 combustion chamber (13) by means of the heat exchanger (19).
3. Engine according to claim 1, c h a r a c t e r i z e d in that control of power
by reducing the mean pressure is accomplished by reducing the compression
volume of the compression chamber (6) by means of a power control and
25 starting valve (5).
4. Engine according to claim 1, c h a r a c t e r i z e d in that the machine has
a substantially tubular body containing a crank mechanism and two pistons
moving in a phased manner in opposite directions.
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5. Engine according to claim 1, c h a r a c t e r i z e d in that the hot air can
be passed through an opened valve (24) via a pressure equalization chamber
(15) and pressure compensating valves (16) into the combustion chamber (13)
and/or to a burner (14).